

### **REMARKS/ARGUMENTS**

Reconsideration is respectfully requested of the Official Action of November 19, 2008, relating to the above-identified application. A one month extension of time, together with the fee associated therewith, is filed herein.

Claim 1 has been amended to incorporate the subject matter of Claims 16, 23 and 24. Corresponding amendments have been made to Claim 41. The feature of recycle has been deleted from Claim 1 and inserted into Claim 8.

No new matter is presented.

The claims in the case are 1 to 5, 8, 9, 12, 13, 18 to 21, 25 to 28 and 30 to 41.

Claims 33 to 40 stand withdrawn as non-elected subject matter.

The rejection of Claims 1 to 5, 9, 12, 13, 16, 18 to 21, 25 to 28, 30 to 32 and 41 under 35 U.S.C. § 103(a) in view of the article by *Wang, et al., Ziran Kexueban* (2003), 42(1), 64-68 taken with *Bucholz*, GB 2016468, is traversed and reconsideration is respectfully requested. A complete copy of the *Wang* article is of record and was provided by applicants. The Office Action points out that *Wang* is silent on the use of a promoter which is a mixture of oxides or sulfides or sulfides and oxides of an element (M) where (M) is selected from the group consisting of iron, cobalt, nickel, lanthanum, cerium and manganese; see Office Action of November 19, 2008, page 3, last line.

It is also to be noted that *Wang* operates at 295°C whereas Claim 1 specifies a minimum temperature of 300°C. Also, the ratio of reactants in *Wang* is CO/H<sub>2</sub>/H<sub>2</sub>S is 2/1/7 which is excluded by Claim 1.

The cited article of *Wang, et al.*, indicates that the activity of the promoter component decreases from cobalt oxide to nickel oxide to iron oxide. Applicants have determined, as shown by Table 3 in the present application, that the combination of iron and nickel which is catalyst (B) has a higher yield than the use of the cobalt catalyst (A) alone.

Regarding the differences in yield between catalyst (B) and catalyst (A) the MC (Methylmercaptan) yield increases from 0.47 (A) to 0.54 (B). This is an unexpected increase of about 13% related to the desired product. Therefore, the use of catalyst (B) containing the combination of promoters leads to a significant advantage in the commercial use of the invention.

Consequently, applicants submit that an unexpected result has been obtained and discovered by using a mixture of the promoter oxides/sulfides as defined in Claim 1. Accordingly, since the *Wang, et al.*, article does not create *prima facie* obviousness for the subject matter of Claims 1 and 41, the rejection should be withdrawn.

The British patent of *Bucholz* does not provide the missing guidelines whereby a person skilled in the art would be led to the combination of components whereby as applicant has demonstrated in Table 3, unexpected improvements are obtained in terms of the yield of the desired product. In fact, applicants' data in Table 3 shows that catalyst (B) which is a combination of iron and nickel oxides, obtains superior results in terms of yield compared with the use of catalyst (A) which uses as a co-catalyst the cobalt material alone. A person skilled in the art could not have predicted the unexpected results in terms of improved yield when using a mixture of materials as a promoter. *Bucholz* fails to disclose the catalyst having the composition

set forth in Claim 1. Therefore, applicants respectfully submit that the record herein shows that unexpected results are obtained and, accordingly, the rejection in terms of obviousness of the claimed invention should be withdrawn.

Favorable action at the Examiner's earliest convenience is respectfully requested.

Respectfully submitted,

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